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ABSTRACT

A computer program entitled "Story Time" encourages preschool children to use the important language skills that develop during the first 3 or 4 years of life to create and print original stories. Although the computer does not write the stories, it aids the children in the creation of stories by prompting them with questions. In order to use the program, a child sits at the terminal with an adult. The first few times the program is used, the adult has to read aloud the instructions and do all the typing. However, after using the program a few times, children are able to take on more and more of the responsibility for reading the instructions and typing in the text. Though the program was produced on a TRS-80 microcomputer with two disk drives, it can easily be adapted for use on a microcomputer that can be programmed in BASIC. To use the program, the child and adult simply answer the questions that the program asks and follow the directions: "Press enter when you are ready to continue," "Print," "What is your name?" "What is the first line of your story?" "End," and so forth. The story, once computed, can be saved on a disk under the name that the child gives the story. The use of the program not only provides a "library" of stories for the child, but it also aids in the development of language skills and the beginning of computer literacy. (HOD)

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COMPUTE FIRST: READ AND WRITE LATER

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Running Head: Compute First

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It is only very recently that those responsible for language arts instruction have begun to use the resources of the computer as an instructional aid. Schwartz (1982) developed SEEN, the Seeing Eye Elephant Network, to prompt college students to "perceive" what they have seen before writing. Marcus (1982) suggested "Compupoem" as a device for encouraging secondary school students to write poetry. A recent article by Barker (1982) discussed the benefits of using a microcomputer as an efficient means of editing, revising and printing the writing done by first grade students. This article will present a suggestion for using the microcomputer to improve the language skills of preschool children.

Unfortunately, many people are under the misconception that computers are only effective for handling numbers. In fact, now and in the future, it is the computer's ability to process linguistic data that will probably have the greatest impact on education as we know it. For example, a study by Andolino (1982) demonstrated that traditional and computerized reading yield comparable results and, of course, computerized reading tests are easier to administer and score. Recent work by Daiute (1982) on the word processing capabilities of computers has shown that writers who work on computers are less concerned about mistakes, write longer manuscripts and revise more often.

Chomsky (1971) found that forming letters is the first step toward reading and suggested reversing the usual order of reading first then writing. The computer program

entitled "Story Time," which follows later in this article, encourages preschool children to use the language skills which develop during the first three or four years of life to create and print original stories. We won't get into the nature vs. nurture argument here) The skills which the students use to create those stories are among the most critical for beginning reading and beginning writing. The computer does not write the stories: it provides what Bereiter and Scardamalia (1980) called "procedural facilitation." It reduces the executive burden of the mental task. (Woodruff, Bereiter & Scardamalia, 1980).

The program is not complicated to use. It simply aids children in the creation of stories by prompting them with questions. In order to use the program, a child sits at the terminal with an adult. The first few times that the program is used, the adult will have to read all the instructions and do all the typing. We have found that after using the program a few times, children take on more and more of the responsibility for reading the instructions and typing in the text.

A listing of the program follows. This particular version was produced on a TRS-80 microcomputer with two disk drives, but it can easily be adapted for use on an microcomputer that can be programmed in BASIC. In order to use the program, the child and adult simply answer the questions that the program asks and follow the directions.

```
1 REM This program was written by Brian D. Monahan
2 REM                              Longfellow Middle School
3 REM                              Yonkers, N.Y. 10701
5 CLS
7REM*******************************************************
10 PRINT @ 17,"DIRECTIONS TO THE TEACHER
14 PRINT
18 PRINT"     This program is meant to be used by a teacher
or parent
22 PRINT "to help a young child develop a story schema.
Since
26 PRINT "the program requires reading and typing, an adult
will
30 PRINT"have to work with young children.  For the
children, the real
34 PRINT"rewards come when their stories appear in printed
form, either
38 PRINT"on the screen or on a line printer.
46 PRINT:PRINT:PRINT
50 LINE INPUT"PRESS ENTER WHEN YOU ARE READY TO
CONTINUE";X1$
55 REM*******************************************************
200 CLEAR10000
210 DIM A$(400)
```

```
215 REM*******************************************************
220 CLS:FOR K=1 TO 5:PRINT:NEXT K
225 REM         PRINTING THE HEADING
240 PRINT TAB(27)"STORY TIME"
260 PRINT TAB(31)"By
280 PRINT TAB(20)"Brian D. Monahan,"
290 PRINT TAB(17)"Longfellow Middle School"
295 PRINT TAB(19)"Yonkers N. Y. 10705"
300 GOSUB 1680
310 REM*******************************************************
320 CLS:PRINT"This program gives you two options: <1>
Allows you to create
322 PRINT"a new story that will be saved on a disk <2>
Allows you to
324 PRINT"read a previously saved story.
340 PRINT:LINE INPUT"TYPE IN THE NUMBER OF YOUR CHOICE.
";R$
360 CLS:IFR$="2" THEN 960
380 REM*******************************************************
400 REM         NAMING THE STORY
420 INPUT "WHAT IS YOUR NAME";N$
440 GOSUB1700
460 CLS:LINE INPUT"GIVE THE STORY YOU ARE GOING TO TELL A
NAME.  THE NAME OF THE   STORY MUST BE 8 LETTERS OR LESS.
";F$
480 CLS:IF LEN(F$)>8 THEN PRINT "SORRY, ";N$;" BUT THE NAME
```

```
THAT YOU GAVE YOUR STORY IS TOO LONG": GOTO 460
500 OPEN "O", 1, F$
510 REM*****************************************************
515 REM         READING IN THE STORY
520 PRINT"THIS PROGRAM WILL LET YOU TELL A STORY TO THE
COMPUTER.          AFTER YOU HAVE PUT IN AT LEAST ONE LINE,
540 PRINT"YOU CAN END THE STORY BY TYPING 'END'."
560 GOSUB 1700
580 LINE INPUT"PRESS 'ENTER' WHEN YOU ARE READY.";P$
590 REM*****************************************************
592 REM         READING THE FIRST LINE
600 N=0
620 A$(N)="BY "+N$:GOTO 800
640 CLS:N=N+1
660 IF N>1THEN 740
680 PRINT "WHAT IS THE FIRST LINE OF YOUR STORY?"
685 REM*****************************************************
700 LINE INPUT A$(N)
720 GOTO 780
740 PRINT "WHAT IS THE NEXT LINE OF YOUR STORY?"
760 LINE INPUT A$(N)
780 IF A$(N)="END" THEN 840
800 PRINT#1,A$(N)
820 GOTO 640
840 CLOSE 1:CLS:
850 REM*****************************************************
```

```
860 PRINT "WELL, ";N$;", YOUR STORY IS NOW SAVED ON A DISK
IN THE MACHINE."
880 PRINT"YOU CAN GET IT BACK AT ANY TIME BY ASKING FOR
";F$;"."
900 PRINT:LINE INPUT"PRESS ENTER TO CONTINUE.";X$
920 GOTO 320
930 REM*****************************************************
940 REM         READING BACK A STORY
960 INPUT"WHAT IS THE NAME OF THE STORY YOU WISH TO
READ";S$:CLS
980 OPEN "I",1,S$
1000 :
1020 N=0
1040 FOR K=1 TO 1000
1060 INPUT#1,A$(K)
1080 N=N+1
1100 IF EOF (1) THEN 1140
1120 NEXT K
1140 CLOSE 1
1145 REM*****************************************************
1160 REM        VIEWING THE STORY
1180 PRINT"YOU HAVE TWO CHOICES. PRESS THE APPROPRIATE
NUMBER TO
1200 PRINT"TO MAKE YOUR CHOICE:  <1> PRINT THE STORY ON THE
SCREEN <2> PRINT THE STORY ON THE PRINTER (MAKE SURE THE
PRINTER IS TURNED ON.)
```

```
1220 INPUT C
1240 IF C=1 THEN 1460
1260 IF LEFT$(C$,1)="N" THEN 1500
1280 LPRINT S$
1300 FOR K=1 TO N
1320 LPRINT A$(K)
1340 NEXT K
1360 PRINT "THE STORY HAS BEEN PRINTED."
1380 GOSUB1680
1400 GOTO 320
1420 CLOSE 1
1425 REM*****************************************************
1440 REM         PRINTING THE STORY ON THE SCREEN
1460 CLS:LINE INPUT" THE STORY WILL BE PRINTED ONE LINE AT
A TIME.  PRESS 'ENTER' TO CONTINUE AND TO SEE THE NEXT
LINE. ";X$
1480 CLS:PRINT:PRINT:PRINTS$
1500 FOR K=1 TO N
1520 PRINT A$(K)
1540 LINE INPUT X$
1560 NEXT K
1580 PRINT "THAT IS THE END OF THE STORY.  IF YOU WISH TO
GET A COPY OF IT, PRESS 'C'; OTHERWISE, JUST PRESS
'ENTER'."
1600 INPUT X$
1620 IF X$="C" THEN 1300
```

```
1640 GOTO 320
1660 END
1670 REM*****************************************************
1675 REM        PAUSE SUBROUTINE
1680 FOR K=1 TO 1500:NEXT:RETURN
1685 REM*****************************************************
1690 REM        SKIP SUBROUTINE
1700 FOR K=1 TO 4:PRINT:NEXT:RETURN
1710 REM*****************************************************
```

After a child has composed a story, the story is automatically saved on a disk under the name that the child gave to the story. This feature allows the child to create a "library" of stories. It would also allow a nursery school class to create and print out a class book.

A story that was composed by Lisa, a four year old child, appears below:

PICTURE
BY LISA

A LITTLE GIRL WENT TO NURSERY SCHOOL.
IT WAS THE DAY TO TAKE PICTURES.
SHE WAS WEARING A NEW DRESS.
THE PHOTOGRAPHER TOOK HER PICTURE.
THE PHOTOGRAPHER KISSED HER WHEN HE LEFT.

In addition to the development of language skills which "Story Time" fosters, there is also, obviously, the benefit of increased computer literacy. Fiske (1982) reported that there are already 15,000 elementary schools in the country that are using microcomputers and that number is expected to rise dramatically in the next decade.

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